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SCHOOL SYSTEM PERSONNEL AS SCIENTIFIC INQUIRERS.

BY- SHAEVITZ, MORTON H.

AMERICAN PSYCHOLOGICAL ASSN., WASHINGTON, D.C.

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THOUGH EXTENSIVE RESEARCH TAKES PLACE IN THE SCHOOL SYSTEM, THAT RESEARCH IS NOT BEING USED DUE TO TOO MUCH EMPHASIS ON PROGRAM SUCCESS AND TOO LITTLE COMMUNICATION BETWEEN THE RESEARCHER AND THE SCHOOL STAFF. IN AN EFFORT TO RECTIFY THE SITUATION, THE COOPERATIVE PROJECT IN EDUCATIONAL DEVELOPMENT (COPED) INITIATED A STUDY OF THE PROCESS OF CHANGE IN EDUCATIONAL SYSTEMS. ONE OF THE MAJOR ATTEMPTS TO PROMOTE AND STUDY THE CLIMATE FOR CHANGE WAS AN IN-SERVICE TRAINING PROGRAM ON THE MECHANICS AND METHODS OF RESEARCH DERIVATION AND UTILIZATION SKILLS FOR SCHOOL PERSONNEL WHO HAD CROSS-BUILDING RESPONSIBILITIES (I.E., A READING SUPERVISOR, ASSISTANT SUPERINTENDENT, HEAD OF COUNSELING SERVICES). THIS WAS CALLED "MACRO-ACTION RESEARCH." THE PROGRAM INVOLVED FIVE STAFF MEMBERS FROM EACH OF FOUR SCHOOL SYSTEMS IN SOUTHERN MICHIGAN WORKING WITH THREE STAFF MEMBERS FROM THE UNIVERSITY OF MICHIGAN. THROUGH THE IN-SERVICE TRAINING PROGRAMS, THE SCHOOL PERSONNEL LEARNED TO IDENTIFY PROBLEMS OF IMPORTANCE TO THEIR SCHOOL SYSTEMS AND TO UTILIZE RESEARCH SKILLS AND SCIENTIFIC KNOWLEDGE WHICH OTHER MEMBERS OF THEIR SCHOOLS CAN DRAW UPON. THE TRAINING PROGRAM ALSO AIDED IN ESTABLISHING A MODEL FOR UNIVERSITY AND SCHOOL SYSTEM COOPERATION. THIS PAPER WAS PRESENTED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION AS PART OF A SYMPOSIUM ENTITLED "UTILIZATION OF INFORMATION FROM EDUCATIONAL RESEARCH CENTERS BY SCHOOL PERSONNEL" (WASHINGTON, D.C., SEPTEMBER 1967). (CG)

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DRAFT

School System Personnel as Scientific Inquirers[1]

Morton H. Shaevitz

Institute for Social Research, Department of Psychology

University of Michigan

The two most significant things about research in school systems is how much of it there is and how little use is made of the findings. The reason for the vast increase in research activities can be tied directly to the availability of federal, state, and private foundation support for educational innovation. As we became increasingly aware of the large subpopulations whose needs were not being adequately met under present school conditions, the need for change was obvious. Unfortunately, the concept of immediate success became tied to the concept of change. The educator then found himself in the position of having to prove instantly that what he was attempting was effective or his attempts at introducing change would be curtailed.

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[1]Presented at the 1967 American Psychological Association, Washington, D.C., as part of a symposium entitled Utilization of Information from Educational Research Centers by School Personnel.

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Specifically, almost all grants for new programs now carry the proviso that some type of evaluative effort must accompany program implementation. Privately stated the implication is clear. "If you want to get more money to do this next year you better show us how good it is." The basic concept of research, an attempt to discover meaningful relationships, then becomes distorted and subverted. Many social scientists and educators share recent experiences of being called in by school systems or other types of educational institutions the day before a project is ending, or even after a project has come to a close and asked to, "Help evaluate the program." Further inquiry usually reveals that what is desired is for someone to recover enough information to convince whatever funding body that is requesting the evaluation that: (1) some attempt at self-scrutiny has taken place, and (2) the project has had overwhelming success.

It would be unfair to say that the only pressure to display competence comes from funding agencies. Local conditions also exert an enormous influence. School officials must prove to their board members that the funds are being spent on programs and projects that are meaningful. Pressure groups within the community, whether they be parents who want to make sure that their children get admitted to college, or those who feel that it's important that their children be prepared for the world of work, are vitally concerned that the educational climate being provided will

accomplish these goals. It is vital that these groups maintain their interest, but it also is necessary that they begin to have some perspective of what is needed for meaningful research to take place.

In a school system which was setting up an innovation subdivision the requests for "What have you done and what has been accomplished" began coming two months after the first supplementary funds for additional programs were made available. In attempting to respond to the pressure for proof this school system launched an impressively large number of experimental programs. There was not sufficient time, however, to implement a research design that could assess the impact of these programs on the population being served. The pressure to succeed, the pressure to show competence, the pressure to display activity greatly limited the possibility that the meaningfulness of the innovative programs could be adduced.

Research must be seen as an attempt to discover rather than as an attempt to prove. If evaluative efforts are to be meaningful the exploration must be along the dimensions of what types of students seem to change in what types of ways as a function of what types of programs or innovations or support services they are being exposed to. Very often it is not a case of whether Program A is better than Program B, or teaching technique X is better than teaching technique Y. Rather the varied approaches must be geared to the

specific characteristics that students bring to the classroom. Research need not be designed in terms of a competition between methodologies, but rather should be an attempt to discover the effects of using different types of approaches. Unquestionably one outcome of this stance could be the abandonment of those types of innovations that seem to be markedly unsuccessful with the broad spectrum of students and where other approaches had much greater value. This, however, should occur as an emergent of an ongoing program of research and evaluation rather than as is often the case, as a function of a simple comparison on a specific measure.

There is another and perhaps more impelling reason that almost all the research that is going on in the schools has no utility in terms of changing behavior of individuals who should be affected by findings. There are vast volumes of reports that are written and widely distributed and studiously ignored. Researchers tend to communicate only with each other. We believe that in order to make research a meaningful enterprise in terms of its having an outcome in behavior change, it is critical that the research consumer be heavily involved in both the formulation, the working of a research problem through an inquiry process, and finally understanding the results in terms that are meaningful for him. We believe further that the scientific method has applicability at the individual level, that there are ways of helping people to acquire research utilization

skills and that this will result in their being able to function more efficiently and more knowledgably. We believe that a first hand experience of how systematic investigation leads to information that will solve operational problems, increases the likelihood that individuals will accept the value of the scientific method, and be more amenable to the internalization of research findings. Finally, we believe that all school personnel are capable of becoming scientific inquirers and that this skill will increase their competence as functioning professionals.

The project that I am about to describe is concerned with testing some of these beliefs. We wish to discover if the goals of skill acquisition are possible, under what conditions they are possible, and to relate these to the types of behavioral changes that do occur in the work situation. Our eventual hope is to find out what it is that does happen to people who have been involved in some of our training programs, and how their involvement then modifies what it is that goes on in school systems, school buildings, school classrooms, and most important, for school children.

COPED (The Cooperative Project in Educational Development) had its origins when a group of educators and social scientists became interested in studying the process of change in educational systems. It began as a loose confederation of personnel from a number of universities who shared these

interests and had first hand experience of working with school systems. The four geographic regions that formed the original COPED included Boston (Boston University and Lesley College), Chicago (University of Chicago), New York (Columbia University and Newark State Teacher's College), and Michigan (University of Michigan). Each region became affiliated with a number of geographically adjacent school systems and began a series of interventions which were designed to both facilitate and allow an inquiry into the process of change.[1,2] Data, both in terms of extensive attitude questionnaires to selected subpopulations within school systems and historical documentation, has been collected over the first years project implementation and we are currently going about the business of analysis. We hope eventually that our findings may be able to answer the general question, "What types of intervention strategies will lead to what types of changes, in what types of school systems?". The overall goal is that systems become more able to manage and direct the process of change rather than change occurring in response to external pressures or internal dissent.

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[1]Watson, Goodwin Ed. Concepts for Social Change, Washington D.C., COPED, NTL, NEA, 1967

[2]Watson, Goodwin Ed. Changes in School Systems, Washington D.C., COPED, NTL, NEA, 1967

At the University of Michigan our COPED project involved working relations with five school systems in Southern Michigan. In four we were intervening actively; the fifth, served as a control system. It is impossible to summarize the variety of communication patterns that developed between the university and the systems involved. One major aspect of our strategy was to deal with all levels of the system simultaneously. Our attempt was not to work only with the upper administration, or with teachers, or with principals, but to involve as many different roles as was feasible in all programs. The three major attempts to promote and study the climate for change were (1) the formation of a change agent team within each system which would be responsible for maintaining, coordinating, and implementing the programs that were being proposed, (2) an inservice training program directed primarily at classroom teachers and principals which we called "microaction research," and (3) an inservice training program for whom we hope to recruit people who primarily had cross-building responsibilities, i.e., a reading supervisor, an assistant superintendent, head of counseling services, head of a principal's committee, and etc., that was called "macroaction research". What I shall do this afternoon is deal specifically with the third program, one designed to increase the knowledge of, utilization of, and implementation of research findings that had implications for system operations.

The program was designed for 20 participants, five from each of the four school systems in our project, and was planned, implemented, and modified by three staff members from the University of Michigan. A number of other people were also involved,in supplementary roles. It was conducted over a five month period during which participants met for three full day sessions plus six half day sessions spread uniformly over this time span. In addition, a considerable amount of work was done by participants in their home situations, and a vast amount of follow-up work was done by the university team. The first major phase of the program ended this past spring although we are planning to provide some follow-up experiences during the coming academic year.

The participants knowledge of research methods spanned the spectrum. At one end was an assistant superintendent in charge of research from a moderately large urban, dynamic system; at the other a classroom teacher in a small rural, yet progressive, school system. The initial challenge was to design a program that would both interest the sophisticated, and yet be meaningful to the naive. Perhaps one of our most important findings is that it is possible to do this if a climate of mutual support, encouragement, and sharing can be maintained.

Rather than attempting to deal with remote findings, we felt it would be most meaningful to begin by focusing on data, that had been collected from within the system

that the participants were coming from. This lent an air of immediancy and relevance to the type of work that would be involved, and provided important information to the university team. One initial agreement between the university and the school systems, was that the school systems would get feedback from the university with regard to the data that was being collected. We felt that school system personnel would be most helpful in designating the type of information that was wanted and that we in turn might help them in designing meaningful ways to give this information to appropriate personnel.

The initial design was a series of meetings between university, the school system personnel that would involve the learning of research derivation and utilization skills in the context of data, which had been collected within the recipient systems. I cannot document all the revisions that we made while implementing the program, but I do wish to emphasize that our attempt was to constantly gather information from the participants as to how meaningful and useful the types of activities we were proposing were for them. If not for this monitoring, a cornerstone of action research, I think that our program would have met with a disasterous end rather than with the positive conclusions that did emerge. The participants were enormously helpful; our greatest difficulty was being able to listen to what they were saying, modify plans in terms of their

needs, yet still stay within the overall goals of the program.

During our first meetings the purpose of the COPED project and the overall design of studying the process of change was shared with the participants. Copies of all test instruments that were being used in their systems were made available. The first task was that of becoming familiar with this material, and beginning to identify the issues that might be involved, and what types of relationships they might be interested in exploring. While all of the participants were supposed to be volunteers, almost half had received a last minute phone call from a superior informing them of their volunteer status. A parallel issue that was dealt with at the opening meeting was the participant's commitment to the training program.

Our first major attempt in utilizing research findings was to extract a small sample of data from our test package and present it to the participants in tabular form. (See Appendix A). We then gave them the task of deriving implications from this data and posing some additional questions that they would like to ask. The response to this first attempt was a disaster. We had not given the participants sufficient background so that they could ask meaningful questions and begin deriving the implications the data would suggest. In addition, participants felt that they were not working on the type of data that was of interest to them. As a

Clinical Psychologist, I had been forced to learn research methods and statistical procedures by working on problems involving agricultural yield. The material was not meaningful or interesting to me and I greatly resented not only the process of learning, but the context within which the learning was taking place. I believe similar dynamics were manifested in this training program. We had preselected the type of data which should be of interest to the participants and then asked them to begin working on it, rather than giving them the chance to identify relevant issues This approach was unsuccessful then for the following reasons: (1) Not sufficient background was given to allow the task to be carried out successfully, (2) sufficient consultation with participants as to what areas they were interested in had not occurred, and (3) the task was a very difficult one and was a failure experience for people who were attempting to deal with research in a different way the first time.

Our participants clearly told us that they were interested in the process of inquiry, but wanted to do that within a context that was of interest to them. Our second approach was to give them the opportunity to identify issues, problems, or questions that they were interested in, and because of their familiarity with the data package had some idea that the answers to their questions might be pursued. The idea was to allow each individual to carry out his own inquiry, the university staff making available resources in data reduction and analysis to allow this to occur. It soon became apparent, however, that given the realistic time limits, we would not be able to fulfill these requests, and so some modification was going to be necessary. In addition, we became aware of the necessity for spending some time in team building so that the individuals who left us would not only be more proficient and knowledgable individually, but would have had experiences in working together in a cooperative way and dealing with the issues of group decision making. We, therefore, asked each of the four school system groups to negotiate among themselves and identify a problem or issue that they were mutually interested in and would be willing to investigate as a team. After a relatively brief period of time each of the school system's teams were able to come up with a specific area. The university team then modeled a process

of precise problem identification where the issues of clarity of question and feasibility of testing were carried out, and we then asked the teams to work with each other; each one helping the other to clarify the issue that it was interested in investigating. We felt it important to emphasize that they would have to be specific if it was going to be possible to retrieve data that would aid in problem solving. This proved to be one of the most meaningful types of experiences that we had. In helping to ask the types of questions that really were specific, we were forced to struggle constructively with the issues of: (1) What is it that you're really trying to find out? (2) How do you go about obtaining this information, and eventually (3) What do you plan to do with this information once you have obtained it?

Following is a list of the four questions that school systemsteams identified:

School System A.

Our school system is currently annexing an adjacent system.

1. What are the attitudes of both sets of personnel towards annexation?

2. What fears do people have about the consequences of annexation regarding their role and status?

3. What benefits are expected as a result of the annexation?

4. What potential conflicts exist and how can these be dealt with?

School System B.

We are concerned with the factors that influence innovativeness of staff members.

1. What individual characteristics are associated with innovative behavior?

2. What building characteristics are associated with innovative behavior?

3. What system characteristics are associated with innovative behavior.

School System C.

We wish to facilitate participation of various levels of personnel in decision making regarding curriculum matters.

1. Is this a problem in our system?

2. If so, at what levels does it exist?

3. What remedial steps can be taken?

School System D.

The general question is what factors are associated with the students motivation to learn.

1. Are there student characteristics which are related to high motivation to learn?

2. Are there classroom characteristics which result in students having high motivation to learn?

3. Are there teacher characteristics which lead to students exhibiting a high motivation to learn?

4. Are there building characteristics which result in students exhibiting a high motivation to learn?

Once the problem had been clearly chosen, the task of the school system team was to intensively study the instruments that were administered in their school system

and begin to identify: (1) where relevant data might be found, (2) what types of comparisons they wished to make, and (3) the specific type of data requests that they were going to making of us. Here again, we did not give sufficient time for preparation of the participants and so the types of requests that were made for data were not as meaningful or as clearly stated as they might have been. It was difficult for us to fulfill their requests and it was very frustrating to the participants since very often they asked for information in a form that was not usable to them. We are still struggling with this issue of how much sophistication the participant needs to ask for data and how much responsibility the university team should take in remaking the data request into a more meaningful and substantive package. We do know that this ia an area that must be worked on, and we hope to have some answers in the very near future. The one thing that we did find, however, is that it was not necessary for the participants to have research and statistical sophistication in order to ask meaningful questions. While they did not request a discrepancy score between principals and teachers on Item A7, they were able to say that "What we want to find out whether teachers and principals differ in terms of how they see the goals of the school system, and so what we would like to have is the average response given by teachers and by the principals so that we can see what the range of differences is." We also discovered that it is necessary

to provide participants with a glossary of terms so that they can ask for data in a consistent way and to learn a data vocabulary that would be useful for them in conversing with research people. This will also make it easier for us to respond to their data request in a reasonably short period of time, and in a way that will be useful to them.

Our closing sessions proved to be the most exciting of all. One of the first things we did was to show them how to interpret a data output sheet. Rather than tabling the information, we provided the raw output as it comes from the computer and spent some time in showing them how their requests for data were being met in terms of this output. The feeling of accomplishment that was generated in peop'e who had always seen this type of information system as incomprehensible was electric. We don't believe that many of the participants are going to be spending their time reading raw data output sheets, but they now have some idea that this is something that they can do, and that it's nothing that they need be afraid of. Many of the difficulties of how you make data requests came out as people found that the types of questions that they asked us were not meaningful. For example, at certain times they had asked for the average response given on a five point question by a group of teachers. What they really were interested in, however, was not the average, but the range of response given. Most systems, however, were able

to make use of the data that they had requested and began feeling that the question that they had originally posed was amenable to research. There were ways for them to gain the information that they needed to propose methods of dealing with the issues that they had identified.

The school system team that began investigating annexation, an issue particularly salient to them, faced a dual problem. There was nothing in the basic data package that bore directly on this issue. This team then not only identified a problem, but went about the business of constructing two sets of questionnaires and administering them to the two systems involved in the annexation. By summer, the data had been summarized, and this team was in the process of communicating this information to the respective school system administrators so that some preventive measures might be taken.

This leads us to what was the closing phase of this program, one that has not yet been accomplished, but we hope will be taking place. Each of the school system teams felt that it had identified a problem that was of importance to the smooth functioning of a school system. Each team specified the type of data that might be related to the issue they were considering, and had worked through a data comparison process. The next consideration was "what is it that one does with data that has been collected and reduced and analyzed and from which it is felt some

meaning can be derived and some implications for action taken." All participants were familiar enough with the lack of success of giving information back in table form. The issue that is now being struggled with is "for whom is the information that was derived most meaningful? How can we involve this population in actually understanding and making the information internal, and how can information be presented in a way that is likely to lead to behavior change?" We expect to be meeting with the school system teams during the fall so that the final process of data reduction and specific plans for feedback can be made and implemented.

Now what do we believe has been accomplished by a training program of this kind? First, a group of individuals within a school system has had the experience of actually identifying an issue that is of concern to them and going through a process that allows them to find answers and eventually to use this information to rectify the conditions that exist. Secondly, there is now a group of individuals within the school system who have skills and knowledge about research utilization and scientific knowledge that others can draw upon. As their skills increase we see them being used with greater frequency by the school system itself as it attempts to deal with operational problems. The standard pattern that goes in a system is that once a problem has been identified, the system turns to outside

resources. The attrition rate is considerably higher than it is for surrounding districts, and a consultant is called to conduct a survey and find out why people are leaving. We believe that it is possible to build into school systems people with resources and skills that would allow them to identify issues as they begin to arise to use internal methods of information gathering that is both more efficient and more meaningful, and begin to deal with these types of problems from within the school system. Third, we believe a model for university school system cooperation is evolving. Universities can be quite useful if they can help school systems personnel pursue their own research interests and support the attempts of the system to carry on a program of continuous self-scrutiny.

How did the participants feel about the program? We attempted to maintain a dialogue with the participants as the training program evolved since we saw it as developmental, and since we felt that their responses would be highly useful to us as we began to conceptualize what it was we were attempting to do. This did, indeed, prove to be the case, and a number of times our participants gave us cues that allowed things to move in more meaningful and productive directions. The final evaluation asked the participants a series of question. The final feedback (See Appendix B) indicates that our attempt was generally successful. We expect to increase this type of inservice

training program and modify it in ways that seem appropriate to different types of school systems. We are not certain of the mechanics and methods for introducing a research derivation and utilization skills to school system personnel. We are convinced that the goal is a worthwhile one, and shall be attempting to devise methods for implementation that are most meaningful and useful to its recepients.

APPENDIX A

HOW DO YOU FEEL ABOUT THESE THINGS?

Getting along with the other students in the class is just as important as school work.	Agree very much	Agree some	Am in between	Disagree some	Disagree very much
1. Each pupil's self report	15 (9) [14]	8 (13) [11]	4 (7) [1]	1 (2) [3]	3 (1) [0]
2. How pupils think the class feels	8 (9) [26]	10 (8) [2]	5 (9) [0]	3 (4) [0]	3 (2) [1]
3. How pupils think their teacher feels	16 (13) [3]	7 (6) [11]	3 (7) [5]	1 (5) [5]	2 (1) [0]
4. Teacher's self report	X (X) [X]				
5. How teacher thinks the class feels	[X]		X (X)		

\# - 5th grade
(#) - 5th grade
[#] - 11th grade

AEG/bl

HOW DO YOU FEEL ABOUT THESE THINGS?

Asking the teacher for help is a good thing to do	Agree very much	Agree some	Am in between	Disagree some	Disagree very much
1. Each pupil's self report	14 (14) [18]	11 (13) [10]	1 (1) [1]	2 (2) [0]	1 (1) [0]
2. How pupils think the class feels	13 (10) [10]	10 (12) [13]	6 (6) [6]	0 (3) [0]	0 (1) [0]
3. How pupils think their teacher feels	15 (15) [7]	9 (13) [12]	2 (4) [7]	3 (0) [2]	0 (0) [1]
4. Teacher's self report	X [X]	(X)			
5. How teacher thinks the class feels	X [X]	(X)			

\# - 5th grade
(#) - 5th grade
[#] - 11th grade

AEG/bl

HOW DO YOU FEEL ABOUT THESE THINGS?

It is good to take part as much as possible in class-room discussions	Agree very much	Agree some	Am in bet-ween	Dis-agree some	Dis-agree very much
1. Each pupil's self report	25 (21) [22]	3 (7) [6]	1 (2) [0]	1 (1) [1]	0 (0) [0]
2. How pupils think the class feels	19 (10) [9]	6 (13) [17]	3 (2) [3]	1 (6) [0]	0 (1) [0]
3. How pupils think their teacher feels	24 (26) [26]	3 (3) [2]	2 (2) [0]	0 (1) [0]	0 (0) [1]
4. Teacher's self report	X (X) [X]				
5. How teacher thinks the class feels	X	(X) [X]			

- 5th grade
(X) - 5th grade
[X] - 11th grade

AEG/bl

Appendix B
n=19

Final Reactions

Q-1. What, if any, potential value can you see in creating a close working relationship between a school system and nearby universities?

a. how might the school system benefit?

	Total Responses
University as resource for new ideas, provide new methods for teaching.	7
University as support for change; University innovativeness would counter school system rigidity.	5
University as resource for research findings, storehouse of findings and data now inaccessible to schools, unpublished data.	11
University as resource for staff pool, consultants, trainers.	9
University would provide data processing equipment, computers, data gathering techniques.	2
University as evaluator; give outsiders objective viewpoint, can assess school problems.	5
University provides needed encouragement for continuous education of teachers, adds to improvement of instruction.	2
Status of University; recognition and cooperation from University staff provide impetus to do better in school systems.	1
No answer.	0

how might the universities benefit?

Schools provide access to natural setting; theorists can deal with real problems and issues.	13
Schools provide testing ground; Researchers can put their ideas to test, see research in action.	9

	Total Responses
Schools can provide actual information on students and staff, results of previous experiences, access to records.	4
Schools give opportunity for changing teacher training programs, could open channels of communication with University teachers' programs.	4
Schools provide opportunity for University people to observe school system receptivity to change.	1
Schools as evaluators; opportunity for feedback and evaluation of University theories.	1
No answer.	0
General comments in Q 1 not applicable to 1a or 1b.	
School System-University cooperative facilitates the cycle of "theory begets practice begets theory" etc.	2
School System-University cooperation would reduce time gap between research findings and their application.	2
No general comments added.	15
Q.2 If you feel that this idea has merit, do you think that a program like Training can help facilitate school system-university cooperation. If so, why?	
Colleguegal relationships; cooperation provides school system people who can work on equal level with University people, eliminates doctor-patient feeling.	3
Understandable data feedback, provides people in system who can feedback data in understandable terms.	2
Establishes trust; University and school system people are brought together, work together.	5

	Total Responses
Mutual interests; school system and university people work on same problems.	2
Opens communication channels; school system people will have access to resource people.	3
Don't know.	1
Not answered.	3
If not, why not?	
Lack of time; people have other pressures, administrators don't support or give release time.	2
Problems not of mutual interest; University and school people have separate interests.	1
Long term training needed; training period is not extensive enough.	1
No response for "why not".	14
Don't know.	1
Q-3. What changes, if any, have there been in your attitudes about the potential value in using of research skills to help identify, diagnose, and offer solutions to problems faced by a school system?	
No change; have always seen the value of using research skills.	6
More awareness; Training has increased feeling that research skills are needed and valuable.	4
Changed attitude about current methods; now see that most research is based on inadequate and faulty research, now aware of void in trained staff.	2
Prospect of putting own skills to use. has increased resondents notion of their value; more hopeful, more confident to seek out areas of needed research.	3

	Total Responses
Changed attitude to feel that "someone else should dig out the data".	1
Increased fear about usage; acquired skills can be used inadequately, as a weapon, etc.	2
No answer.	1

Q-4. There have been a number of ups and downs for the University of Michigan team as the Training Program has progressed. What aspects of the program did you feel were the most exciting?

General positive comments; training was exciting, it was all worthwhile.	1
Session on feedback techniques; learning techniques, problems or utilization, etc.	6
Data feedback; working with real data, seeing actual data printouts.	5
Process activity; Role playing; acting as consultant, the session on process with the "A" trainers.	4
Setting up own problem; tackling a specific problem to work on.	5
Studying data package; use data package as a source, posing questions about items on data package.	4
When our team was permitted to choose its own course of action.	1
Extra training benefits; coffee with the University of Michigan team, the trip with the team to and from Ann Arbor.	1
All day meeting, more time to work.	1
No answer	1

What aspects did you find least satisfactory?

	Total Responses
Not enough time; 3 hours is not enough time, too little time to ever get into anything.	2
Earlier meetings seemed to have no direction; seemed to be looking for something to do, confusing; too much talk.	6
Data feedback; objected to charts, figures, etc.	1
Intra-team problems; lack of stimulation within own team, indecision, more focus on teamwork skills needed.	3
All districts not ready; different systems at different stages, so progress retarded.	1
Unequal relationship to University team; school teams seemed to feel inferiority.	1
No data collected in system, behind because had no actual data to work with.	3
Poor communication between central and various school concerning Training in system.	1
No answer.	4

Q.5. If Training is recommenced in the Fall, what suggestions do you have for improving the program so that it will be more helpful to individual trainees and, in turn, to their school systems?

Provide more time; have longer sessions, start earlier in the school year.	2
Train people who are interested; have people with some background, interest or training, be explicit about goals so only those interested will come, don't include those appointed by their principals, etc., who don't want to come.	3
Closer working relationship between "micro" and "macro" teams; start both teams together, more meetings with "micro" team.	2

	Total Responses
Provide more teamwork skills; more sensitivity skills needed to deal with other groups.	2
More contact among the different systems and with the University.	1
More problems to set up; spend more time on actual problems and less on wasted talk, encourage research projects in each system.	6
Provide more summaries of diagnostic techniques, on creation and use of data package.	3
Have additional feedback models and ideas, give feedback strategies and rationales.	2
Provide better scheduling, have more meetings with individual systems.	2
More structure; give better and more specific explanation of macro-training, more direction.	1
Have more teachers involved.	1
Provide training to train others.	1
No answer.	1
Q.6 If, indeed, macro-training does begin in the Fall, would you like to be a participant?	
Yes.	15
No-I am already on "micro" and "change-agent" teams.	1
Unable because of other commitments.	2
Depends on definition of "macro" trainer role.	1
Q.7 Would you like to continue working with the University of Michigan staff during the summer?	
Yes	9
No	1
Unable because of other commitments	8
Maybe	1